Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A method for making a magnetic sensor, the method comprising the steps of:

fabricating a giant magnetoresistive stack on a surface of a layer of bottom shield material, the giant magnetoresistive stack including an etch stop layer positioned on an end of the giant magnetoresistive stack opposite the surface of the ~~wafer~~ layer of bottom shield material and a buffer layer positioned on the etch stop layer;

depositing an insulating material on the giant magnetoresistive stack and the surface of the layer of bottom shield material;

planarizing the insulating material to form a top surface of the insulating material lying in a plane adjacent to or passing through the buffer layer, leaving at least a portion of the buffer layer on the etch stop layer;

etching the portion of the buffer layer to the etch stop layer; and

depositing a top shield layer on the insulating material and the giant magnetoresistive stack, the top shield layer making electrical contact with the giant magnetoresistive stack.

2. (Previously Presented) A method for making a magnetic sensor according to claim 1, wherein the step of planarizing the insulating material is performed using chemical machining polishing.

3. (Previously Presented) A method for making a magnetic sensor according to claim 1, wherein the step of planarizing the insulating material is performed using a vacuum etch process.

4. (Previously Presented) A method for making a magnetic sensor according to claim 1, the method further comprising the step of:

etching the etch stop layer prior to the step of depositing the top shield layer on the insulating material and the giant magnetoresistive stack.

5. (Previously Presented) A method for making a magnetic sensor according to claim 1, wherein:

the insulating material comprises a material selected from the group of Al_2O_3, AlN, AlON, SiO_2, SiN and SiON.

6. (Previously Presented) A method for making a magnetic sensor according to claim 1, wherein:

the etch stop layer comprises a material selected from the group of Au, Cu, NiFe, CoFe, NiCoFe, Al_2O_3, and Ta.

7. (Previously Presented) A method for making a magnetic sensor according to claim 1, wherein:

the buffer layer comprises a material selected from the group of Ta, W, Ti, Cu, SiO_2 and SiN.

8. (Withdrawn) A magnetic sensor made in accordance with the method of claim 1.

9. (Withdrawn) A method for making a magnetic sensor for a disk drive read head, the method comprising the steps of:

fabricating a giant magnetoresistive stack on a surface of a layer of bottom shield material;

depositing an insulating material on the giant magnetoresistive stack on the surface of the layer of bottom shield material;

depositing a self-planarizing material on the insulating material;

planarizing the self planarizing material and the insulating material using a vacuum etch process that removes the self planarizing material and the insulating material at the same rate until a surface of the insulating material lies in a plane adjacent to an end of the giant magnetoresistive stack; and

deposing a top shield layer on the insulating material and the giant magnetoresistive stack.

10. (Withdrawn) A method for making a magnetic sensor for a disk drive read head according to claim 9, wherein:

the insulating material comprises a material selected form the group of

alumina, SiO_2, SiN.

11. (Withdrawn) A method for making a magnetic sensor for a disk drive read head according to claim 9, wherein:

the self-planarizing material comprises a material selected from the group of a spin on glass and a photo resist.

12. (Withdrawn) A magnetic sensor made in accordance with the method of claim 9.

13. (Withdrawn) A method for making a magnetic sensor for a disk drive read head, the method comprising the steps of:

fabricating a giant magnetoresistive stack on a surface of a layer of bottom shield material, the giant magnetoresistive stack including an etch stop layer positioned on an end of the giant magnetoresistive stack opposite the surface and a buffer layer positioned on the etch stop layer;

depositing an insulating material on the giant magnetoresistive stack and the surface of the layer of bottom shield material;

depositing a self-planarizing material on the insulating material;

planarizing the self-planarizing material and the insulating material using chemical machining polishing to form a top surface of the insulating material lying in a plane adjacent to or passing through the buffer layer;

etching the buffer layer; and

depositing a top shield layer on the insulating material and the giant magnetoresistive stack, the top shield layer making electrical contact with the giant magnetoresistive stack.

14. (Withdrawn) A method for making a magnetic sensor for a disk drive read head according to claim 13, the method further comprising the steps of:

etching the etch stop layer prior to the step of depositing a top shield layer on the insulating material and the giant magnetoresistive stack.

15. (Withdrawn) A method for making a magnetic sensor for a disk drive read head according to claim 13, wherein:

the insulating material comprises a material selected from the group of

Al_2O_3, AlN, AlON, SiO_2, SiN and SiON.

16. (Withdrawn) A method for making a magnetic sensor for a disk drive read head according to claim 13, wherein:

the etch stop layer comprises a material selected from the group of Au, Cu, NiFe, CoFe, NiCoFe, Al_2O_3, and Ta.

17. (Withdrawn) A method for making a magnetic sensor for a disk drive read head according to claim 13, wherein:

the buffer layer comprises a material selected from the group of Ta, W, Ti, Cu, SiO_2 and SiN.

18. (Withdrawn) A magnetic sensor made in accordance with the method of claim 13.

19. (Withdrawn) A method for making a magnetic sensor for a disk drive read head, the method comprising the steps of:

fabricating a giant magnetoresistive stack on a surface of a layer of bottom shield material;

depositing a self-planarizing material on the giant magnetoresistive stack on the surface of the layer of bottom shield material;

planarizing the self planarizing material using a vacuum etch process that removes the self planarizing material until a surface of the self planarizing material lies in a plane adjacent to an end of the giant magnetoresistive stack; and

depositing a top shield layer on the self-planarizing material and the giant magnetoresistive stack.

20. (Withdrawn) A method for making a magnetic sensor for a disk drive read head according to claim 19, wherein:

the self-planarizing material comprises a material selected from the group of a spin on glass and a photo resist.

21. (Withdrawn) A magnetic sensor made in accordance with the method of claim 19.

22. (Withdrawn) A method for making a magnetic sensor according to claim 1, wherein the step of planarizing the insulating material comprises the steps of:

depositing a self-planarizing material on the insulating material; and

planarizing the self-planarizing material and the insulating material using a vacuum etch process that removes the self-planarizing material and the insulating material at the same rate until a surface of the insulating material lies in a plane adjacent to an end of the giant magnetoresistive stack.

23. (Withdrawn) A method for making a magnetic sensor according to claim 22, wherein:

the self-planarizing material comprises a material selected from the group of a spin on glass and a photo resist.